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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/026,629
Filing Date: December 27, 2001
Appellant(s): CACERES ET AL.

Joel S. Armstrong
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 10/01/04.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal in the brief is substantially correct. The changes are as follows:

The rejection of record over claims 1, 3, 7, 9 and 21 over USPN 4,897,297 to Zafiroglu alone has been withdrawn. The new rejections are presented below.

- Claims 13 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,897,297 to Zafiroglu. (maintained) RP 1/22/05

- Claims 1-3, 7-9, 11, 14-15, 17, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,897,297 to Zafiroglu in view of USPN 5,669,894 to Goldman et al.

*(7) **Argument***

Appellant's brief includes arguments as set forth in 37 CFR 41.37(c)(1) and (c)(vii).

*(8) **Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

*(9) **Prior Art of Record***

5,669,894	GOLDMAN	09-1997
6,075,177	BAHIA	06-2000
4,897,297	ZAFIROGLU	01-1990

*(10) **Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-5, 7-18, and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,669,894 to Goldman et al. in view of USPN 6,075,177 to Bahia et al.

Goldman teaches an absorbent member comprising a permeable (nonwatertight) nonwoven thermoplastic fibers and fibrous materials which form an envelope having walls (functioning as a collapsible envelope as the same materials are employed). The fibrous materials include naturally occurring fibers of cotton, or synthetic fibers of polyesters. See col. 21, lines 20-55 and col. 42, lines 1-8. The fibers may be of single or combined polyethylene, polyester, PET, polypropylene, hydrophilic or hydrophobic see col. 26, lines 10-35, and col. 37, lines 20-49. The fibers have various lengths and may be short or long synthetic fibers with hydrophilic surfaces of cross-linked cellulose, polypropylene, polyester, and many others. See col. 36, lines 34-55 and col. 37, lines 55-65. A hydrogel-forming absorbent polymer such as sodium polyacrylate is within the envelope. See col. 31, lines 40-65, col. 32, lines 1-15, lines 55-65, col. 40, lines 35-55, Example 3, col. 17, lines 1-28, Table 1, col. 22, lines 30-41.

Per Appellant's disclosure that the polymer absorbent is sodium polyacrylate made by surface crosslinking treatment (Appellant's page 7, lines 5-7 and page 13, lines 18-20), Goldman's same material and same surface crosslinking treatment of polymer absorbent (at col. 8, lines 35-45, col. 9, lines 54-58, and col. 16, lines 4-10 and lines 28-41), inherently is a "core/shell" polymer and inherently functions the same, e.g. "in particulate form...comprises a core of less cross-linked...". See especially col. 9, lines 54-55 and col. 16, lines 30-36. Goldman includes the same materials in his absorbent member, hence, the envelope being collapsible is inherently provided.

Goldman does not teach a viscose fiber (claims 4-5, 10, 12, 16, 18). Bahia teaches a wound dressing. At col. 3, lines 40-43, Bahia teaches a viscose rayon or viscose cotton fiber. Bahia further teaches several different viscose fibers are derived from cellulose depending upon

the absorbency and tenacity required. Hence it would have been obvious to one of ordinary skill in the art to modify the absorbent members of Goldman to further include viscose fibers since Bahia teaches doing so provides an absorbent nonwoven material with varying degrees of absorbency and tenacity at col. 3, lines 40-60.

The fibers of Goldman are not of fabrics of textile, however Bahia provides textile fabrics teaching strands can be any linear textile material formed from the filaments or fiber, for example a yarn, sliver, roving or rope see col. 2, lines 10-15 and abstract (equivalent to Appellant's cloth types). It would have been obvious to one of ordinary skill in the art to include textiles because Bahia provides the conventional teaching of employing textiles as textiles provide a stronger material.

Goldman does not explicitly teach the longer fibers of viscose. However, as Goldman explained above, fibers can be of any length. Since Bahia teaches viscose fibers as a suitable fiber in a nonwoven absorbent material, it would have been obvious to one of ordinary skill in the art to modify the absorbent of Goldman to provide a viscose fiber of longer fibers since Bahia teaches providing a viscose fiber to vary absorbency.

Goldman does not explicitly teach viscose fibers from 70 to 90% in the total weight of the nonwoven fabric (claims 8, 12, and 18) . Goldman, however, teaches at col. 36, lines 24-25 that fibers may be present from 10 to 90% in order to produce desired properties for absorbency. Hence it would have been obvious to one of ordinary skill in the art to modify the absorbent member of Goldman to vary the percentages of fibers, be it viscose or polyester, or polypropylene since Goldman teaches varying the weight percentage by blending fibers with cellulose for example, results in a high compressive modulus, improving performance at col. 36,

lines 45-65. Additionally, Bahia teaches viscose fibers may be used in a cellulose and nonwoven as cited above. Moreover, weight percentage of fibers are optimizable, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272.

Regarding claims 1, 7, 14, and 20-22, the Examiner takes the position that since the polymer absorbent particles are the same (surfaced crosslinked sodium acrylate), then how they react in excess or theoretical amount or relieving pain and cooling effects are inherent.

Goldman does not explicitly discuss an excess from 5 to 10 percent by weight of the theoretical amount just required to fill a envelope completely (per instant claim 7). Goldman includes the same material and would therefore function similarly. Further that a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials used. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of polymer particles in excess or theoretically directly effect the size of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in an aqueous environment.

Claims 13 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,897,297 to Zafiroglu.

Zafiroglu teaches an elastic wet compress. The compress is either cold (equivalent to cooling effect per instant claim 22) or hot and in the form of wet fabrics woven or nonwoven applied to treat burns (equivalent functionality to the method of removing pain as recited) and the fabric is water-permeable (nonwatertight) (see col. 1, lines 11-15 and col. 2, lines 20-35). The fibers included are of polypropylene and polyester staple fibers of natural fibers see col. 4, lines 40-68 of 3.8 cm in length. The article of Zafiroglu is of two layers in any shape such as a pillow or tube and is also conformable, thereby providing for Appellant's collapsible envelope. See col. 4, lines 12-20. The article is filled within with super-absorbent polymeric particulate materials of a hydrogel which absorb liquids expanding the shape of the article as it swells by the absorbance of water at col. 3, lines 29-68. Such description is equivalent to Appellant's core-shell polymer particles absorbing to swelling state as per instant claim 13. The core-shell particles as claimed would perform essentially the same method of relieving pain as Appellant because the polymer particles of Zafiroglu perform the same function of swelling into a gel to conform to the shape of the envelope when wetted with water. Zafiroglu provides using a similarly constructed material and conventionally applying the article to a sore part of a body to relieve pain. That water vapor is to be desorbed from hydrogel particles is an inherent property as the same polymer materials are used. See patented claims 1 and 4. That a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials used. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of polymer particles in excess or theoretically directly effect the size

of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in an aqueous environment. See also Example 1.

To claim 25, what condition a part of a human body is in e.g. normally dry is of no consequence. Patentability of an article is to the article itself not how or where an article is applied.

NEW GROUND OF REJECTION

Claims 1-3, 7-9, 11, 14-15, 17, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 4,897,297 to Zafiroglu in view of USPN 5,669,894 to Goldman et al.

Zafiroglu teaches an elastic wet compress. The compress is either cold (equivalent to cooling effect per instant claim 22) or hot and in the form of wet fabrics woven or nonwoven applied to treat burns (equivalent functionality to the method of removing pain) and the fabric is water-permeable (nonwatertight) (see col. 1, lines 11-15 and col. 2, lines 20-35). The fibers included are of polypropylene and polyester staple fibers of natural fibers see col. 4, lines 40-68 of 3.8 cm in length. The article of Zafiroglu is of two layers in any shape such as a pillow or tube and is also conformable, thereby providing for Appellant's collapsible envelope. See col. 4, lines 12-20. The article is filled within with super-absorbent polymeric particulate materials of a hydrogel which absorb liquids expanding the shape of the article as it swells by the absorbance of water at col. 3, lines 29-68. Such description is equivalent to Appellant's absorbing to swelling state as per instant claims 1 and 13. While Zafiroglu and Goldman do not describe the

super-absorbent polymeric particulate materials as a "core/shell" polymer, such material inherently functions the same, e.g. "in particulate form...comprises a core of less cross-linked..." and is therefore considered to be a core/shell polymer. Per Appellant's disclosure that the polymer absorbent is sodium polyacrylate made by surface crosslinking treatment (Appellant's page 7, lines 5-7 and page 13, lines 18-20), Goldman's same material and same surface crosslinking treatment of polymer absorbent (at col. 8, lines 35-45, col. 9, lines 54-58, and col. 16, lines 4-10 and lines 28-41), inherently is a "core/shell" polymer and inherently functions the same, e.g. "in particulate form...comprises a core of less cross-linked...". See especially col. 9, lines 54-55 and col. 16, lines 30-36. Thus it would have been obvious of one having ordinary skill in the art to have modified the Zafiroglu reference to include a core/shell polymer as described because Goldman specifically teaches the same surface crosslinked hydro-gel polymer absorbents such as sodium polyacrylate and would be expected to function the same as Appellant intends (see col. 8, lines 35-45, col. 9, lines 54-58, and col. 16, lines 4-10 and lines 28-41 of Goldman).

The outer layers of the article (equivalent to Appellant's envelope) is of synthetic textile fibers, wood pulp fibers (implies cellulosic material per instant claim 9), or cotton at col. 4, lines 4-6 (per instant claim 3). Zafiroglu does not discuss an excess from 5 to 10 percent by weight of the theoretical amount just required to fill a envelope completely (per instant claim 7). That a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials and specified amount is used. It has been held that discovering an optimum value of a result effective variable involves only routine

skill in the art. *In re Boesch*, 617 F.2d 272. The amount of polymer particles in excess or theoretically directly effect the size of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in an aqueous environment. Zafiroglu provides using a similarly constructed material and conventionally applying the article to a sore part of a body to relieve pain. That water vapor is to be desorbed from hydrogel particles is an inherent property as the same polymer materials are used. See col. 2, lines 19-20 of Zafiroglu teaching treatment of burns.

Zafiroglu does not teach sodium polyacrylate (per instant claims 2 and 14). Per Appellant's disclosure that the polymer absorbent is sodium polyacrylate, Goldman's same material, inherently is a "core/shell" polymer and inherently functions the same, e.g. "in particulate form...comprises a core of less cross-linked...". See col. 9, line 54. It would have been obvious to one of ordinary skill in the art to include sodium polyacrylate because Goldman provides the conventionality of using such type of super absorbent polymers.

Zafiroglu does not include a longer or shorter fiber comparison of the polypropylene and polyester fibers nor the weight percentage included (per instant claims 8 and 14). Goldman teaches an absorbent member comprising a permeable (nonwatertight) nonwoven thermoplastic fibers and fibrous materials which form an envelope having walls (functioning as a collapsible envelope as the same materials are employed). The fibrous materials include naturally occurring fibers of cotton, or synthetic fibers of polyesters. See col. 21, lines 20-55 and col. 42, lines 1-8. The fibers may be of single or combined polyethylene, polyester, PET, polypropylene,

hydrophilic or hydrophobic see col. 26, lines 10-35, and col. 37, lines 20-49. The fibers have various lengths and may be short or long synthetic fibers with hydrophilic surfaces of cross-linked cellulose, polypropylene, polyester, and many others. See col. 36, lines 34-55 and col. 37, lines 55-65. Goldman does not explicitly teach viscose fibers from 70 to 90% in the total weight of the nonwoven fabric (claims 8 and 14) . Goldman, however, teaches at col. 36, lines 24-25 that fibers may be present from 10 to 90% in order to produce desired properties for absorbency. Hence it would have been obvious to one of ordinary skill in the art to modify the article of Zafiroglu to vary the percentages of fibers or lengths, be it polyester or polypropylene since Goldman teaches varying the length and weight percentage by blending fibers with cellulose for example, results in a high compressive modulus, improving performance at col. 36, lines 45-65.

(11) Response to Argument

Appellant argues that the cited references do not teach or suggest incorporation into a envelope an amount of polymer particles in excess compared to the theoretical amount that would be just required to fill up the envelope when they are in the full swollen state, nor any advantages. Appellant also argues the method for relieving pain from a sore part of an individual's body with a cooling article is not taught or suggested by the prior art. That a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials used in the same way, for the same purpose of inflating an envelope upon contact with water as the amount of particles effects the size of the envelope. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of

polymer particles in excess or theoretically directly effect the size of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the amount of absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in a specified amount in the same aqueous environment, thus the prior art polymers and envelope would react in the same way upon contact with water or moisture. In response to Appellant's allegation that the Office Action has not established a prima facie case of obviousness because the products are entirely different, the Examiner does not agree. Motivation and suggestion to combine the prior art exists because the same materials and amounts are provided in a similar manner as previously set forth. Goldman and Bahia are in the same technical field such as nonwovens. Once a reference teaching a product appearing to be substantially identical is made the basis of a rejection, and the Examiner presents evidence or reasoning tending to show inherency, the burden shifts to the Appellant to show an unobvious difference. The Appellant has not provided any objective evidence to the contrary. Per Appellant's disclosure, the polymer absorbent claimed is sodium polyacrylate made by surface crosslinking treatment (Appellant's page 7, lines 5-7 and page 13, lines 18-20). Goldman teaches the same material in a specified amount, and teaches the same surface crosslinking treatment of said polymer absorbent (at col. 8, lines 35-45, col. 9, lines 54-58, and col. 16, lines 4-10 and lines 28-41). Therefore, the claimed polymer is inherently a "core/shell" polymer and inherently functions in the same way Appellant intends, e.g. "in particulate form...comprises a core of less cross-linked...". See especially col. 9, lines 54-55 and col. 16, lines 30-36 of Goldman.

Appellant's contentions toward Goldman being different from the instant claimed invention because Goldman teaches an absorbent used in containing body fluids such as urine for disposable diapers does not differentiate the claimed invention from the prior art teaching because the instant claimed invention per the disclosure on page 7, lines 9-11, acknowledges that the claimed polymers are used to make disposable diapers exhibiting improved absorption particles and thus would function the same way Appellant intends. Further, that Goldman may be used for absorbing urine does not teach away from the claimed absorbent polymer particles because the elements, amounts, and materials are the same. Appellants claim an article with cooling capability by water desorption from a water-swollen gel, Goldman's article functions as the same cooling capability because water contacts the same water-swollen gel (hydro-gel absorbent polymer of Goldman) and what occurs at certain points in time is inherent. Appellant argue the use of Bahia, however Bahia was used to address the type of fibers. An advantage would be expected because Bahia teaches viscose fibers varies absorbency properties (col. 3, lines 40-60 of Bahia).

Appellant continues to argue that the references do not teach the excess and theoretical recited comparison. As set forth above, the amounts of polymer in excess or theoretical amounts is an optimizable feature because the amount effects the shape of the envelope. The same results would also result e.g. that the article when wet with water absorbs water and swell to keep the envelope dry. Appellant argues that the Examiner has ignored the excess and theoretical recited comparison and argued capability and process limitations. However, the Examiner did not ignore the comparison, as the comparison was addressed, however the case law has now changed to an optimizable feature and not capability and process directed. Appellant argues the

Examiner's suggestion to simply claiming the actual weight percent of polymer particles added to make the end product because Appellant submits that the amount may change dependent upon the volume of the envelope. This submission is recognized as an optimal feature because incorporating less or more particles will directly effect the size of the envelope and is thus a result effective variable. Appellant claims an amount. The prior art teaches an amount. What in theory occurs, is again, optimizable based on the desired size of the envelope.

Appellant contends that there are different objectives of the claimed invention and Goldman due to the cooling effect and escaping of fluids. However, there is no different objective as alleged by Appellant because the same surface crosslinked hydro-gel absorbent polymers are used within an envelope. When moisture contacts the Goldman combination, the same effects would be present. Appellant has not submitted objective evidence to show a difference. Appellant alleges no motivation exists because the purpose is different. The Examiner does not agree. Appellant further alleges that the purpose of containing particles in Goldman and Bahia is to swell and retain liquid. Goldman teaches an absorbent member comprising a permeable (nonwatertight) nonwoven thermoplastic fibers and fibrous materials which form an envelope having walls. The fibrous materials include naturally occurring fibers of cotton, or synthetic fibers of polyesters. See col. 21, lines 20-55 and col. 42, lines 1-8. A hydrogel-forming absorbent polymer such as sodium polyacrylate is within the envelope. See col. 31, lines 40-65, col. 32, lines 1-15, lines 55-65, col. 40, lines 35-55, Example 3, col. 17, lines 1-28, Table 1, col. 22, lines 30-41. Again, as set forth above, per Appellant's disclosure that the polymer absorbent is sodium polyacrylate, which is Goldman's same material, and inherently is a "core/shell" polymer, inherently functioning the same, e.g. "in particulate form...comprises a

core of less cross-linked...". Goldman includes the same materials in his absorbent member, hence, the way polymer particles react when in a dry, wet, or any state in between, absorbing or desorbing water, is inherently provided.

Appellant argues claim 13 to a method for relieving pain from a sore part of an individual's body and alleges that nowhere is this recited method taught in the cited references. Zafiroglu was used to teach this method because Zafiroglu teaches absorbent polymer particles in an envelope that when contacted with liquid, the hydrogel expands the shape of the article (thus changing the volume of the envelope) at col. 3, lines 29-68. This teaching is equivalent to Appellant's method of wetting the particles and over time a gel mass fills up an envelope. See especially col. 3, lines 64-66. Zafiroglu teaches applying this compress to a sour part of an individual's body because it is used as a medical wet compress or bandage (col. 1, lines 51-54) and treats burns (col. 2, lines 19-20).

Appellant further contests that Graham does not teach polymer particles having a core-shell structure. Per Appellant's disclosure (page 8, lines 25-32) that the polymer absorbent is sodium polyacrylate, Goldman's same material, inherently is a "core/shell" polymer and inherently functions the same, e.g. "in particulate form...comprises a core of less cross-linked...". Goldman teaches the same surface crosslinking to the absorbent polymer as Appellant describes e.g. "superabsorbent polymers that show a shell-core structure ...is obtained by submitting a lightly cross-linked base polymer resulting from the polymerization of acrylic monomers to a surface cross-linking process" found on page 7, lines 4-7. Goldman explicitly teaches this process with the same acrylic monomer at col. 16, lines 30-40 and col. 8, lines 35-45, col. 9, lines 54-58, forming surface and internal boundaries. Thus a core-shell structure is

obtained and the same improved properties are there or expected despite Appellant's contentions toward the structure of the instantly claimed polymer has unexpectedly improved properties when applied to the skin. The same benefits of thermal inertia and low heat losses would also be expected because the same materials are used despite Appellant's contentions.

Appellant argues the methods of Goldman and Bahia, however Goldman and Bahia were not used to teach the method of relieving pain.

Appellant argues Zafiroglu to the particles in excess and theoretical amount comparison. Again that a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials in an amount is used for the same purpose, as set forth above. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of polymer particles in excess or theoretically directly effect the size of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in an aqueous environment. Zafiroglu teaches absorbent polymer particles in an envelope that when contacted with liquid, the hydrogel expands the shape of the article (thus changing the volume of the envelope) at col. 3, lines 29-68 and col. 3, lines 64-66. To instant claims 13 and 25 to the method using the core shell structure of the particles, again Zafiroglu was used to teach this method because Zafiroglu teaches absorbent polymer particles in an envelope that when contacted with liquid, the hydrogel

expands the shape of the article (thus changing the volume of the envelope) at col. 3, lines 29-68. This teaching is equivalent to Appellant's method of wetting the particles and over time a gel mass fills up an envelope. See especially col. 3, lines 64-66. Zafiroglu teaches applying this compress to a sour part of an individual's body because it is used as a medical wet compress or bandage (col. 1, lines 51-54) and treats burns (col. 2, lines 19-20). When you treat burns with said bandage/compress, you are applying it to a sore part of an individual as claimed. Zafiroglu teaches the same superabsrorbent polymer, and not only a small percentage as Appellant alleges. Zafiroglu was used to teach the method of relieving pain requiring the steps of wetting absorbent particles as recited and applying to a sore part. Thus the same benefits would be expected despite Appellant's contentions. Appellant argues the Example in Zafiroglu to the cooling effect is only in effect when wet. Appellant's article is also exposed to water in the same way, there is no difference. That Zafiroglu teaches icing the article does not teach away from the claimed article because the same methods and ingredients are provided by Zafiroglu. Appellant argues that the cooling effect is provided by allowing the water vapor that is desorbed from the polymer particles to escape through an outer wall of an envelope while absorbing liquid generated on the application site. This recitation is not claimed. Moreover, the same water is applied to the article; the after effects would be present once time subsides.

Appellants argue instant claims 23 and 24 over Zafiroglu because Appellant alleges Zafiroglu fails to teach the excess theoretical amount comparison. While Appellant acknowledges that Zafiroglu teaches the article contains swellable particles, indeed the article of Zafiroglu contains an amount of swellable particles, in particular, 10% Superabsorbent Polymer powder (see Example 1, especially col. 5, line 29) and per patented claims 1 and 4, 5 to 30

percent polymer that is capable of absorbing 15 to 35 times its weight in water to form a hydrogel, so when wetted is capable of swelling to 3 to 10 times its original volume. This teaching by Zafiroglu explicitly teaches the same material and functionality as claimed, despite the different wording of the amount in excess compared to a theoretical amount. Zafiroglu teaches the method for relieving pain comprising the steps of wetting polymer particles, and applying the article to a sore part on a body, the same steps as claimed. The core-shell particles as claimed would perform essentially the same method of relieving pain as Appellant because the polymer particles of Zafiroglu perform the same function of swelling into a gel to conform to the shape of the envelope when wetted with water. Appellant has not provided any objective evidence to prove that Zafiroglu's article would not provide the method of relieving pain in the same way as claimed. Further, that a envelope is able to hold X amount of polymer particles in excess than theoretically would be, is a result effective variable and as such, an optimizable feature as it is well within the purview of one having ordinary skill in the art given the same materials used. It has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272. The amount of polymer particles in excess or theoretically directly effect the size of the envelope and overall, the product efficiency. One would desire to optimize the particles, maximizing the absorbent polymer within the envelope dependent upon the desired size of the envelope. The state of the envelope or polymers in the envelope or the theoretical/excess amount of polymers would be expected because the same materials are used in an aqueous environment.

Appellant points to Zafiroglu's requirement of a substantial amount of solid diluent, arguing that because of this teaching, the reference teaches away. Appellant may not have

considered that the instant claims contain "comprising" language, and does not exclude a diluent. Appellant argues Zafiroglu in view of Goldman to the same excess theoretical amount comparison. The same position is taken as explained above. All cited references indeed teach an amount of polymer absorbent used, the excess and theoretical amounts clearly effect the shape/volume of the container/envelope and are obvious variations. The rejections above are held for reasons of record.

For the above reasons, it is believed that the rejections should be sustained.

This examiner's answer contains a new ground of rejection set forth in section **(10)** above. Accordingly, appellant must within **TWO MONTHS** from the date of this answer exercise one of the following two options to avoid *sua sponte* **dismissal of the appeal** as to the claims subject to the new ground of rejection:

(1) **Reopen prosecution.** Request that prosecution be reopened before the primary examiner by filing a reply under 37 CFR 1.111 with or without amendment, affidavit or other evidence. Any amendment, affidavit or other evidence must be relevant to the new grounds of rejection. A request that complies with 37 CFR 41.39(b)(1) will be entered and considered. Any request that prosecution be reopened will be treated as a request to withdraw the appeal.

(2) **Maintain appeal.** Request that the appeal be maintained by filing a reply brief as set forth in 37 CFR 41.41. Such a reply brief must address each new ground of rejection as set forth in 37 CFR 41.37(c)(1)(vii) and should be in compliance with the other requirements of

37 CFR 41.37(c). If a reply brief filed pursuant to 37 CFR 41.39(b)(2) is accompanied by any amendment, affidavit or other evidence, it shall be treated as a request that prosecution be reopened before the primary examiner under 37 CFR 41.39(b)(1).

Extensions of time under 37 CFR 1.136(a) are not applicable to the TWO MONTH time period set forth above. See 37 CFR 1.136(b) for extensions of time to reply for patent applications and 37 CFR 1.550(c) for extensions of time to reply for ex parte reexamination proceedings.

Respectfully submitted,

Tamra L. Dicus
Examiner
Art Unit 1774

[tld]
January 27, 2005

Conferees:
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